GEOGRAPHIC NEWS BULLETIN

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A LUR TRIBESMAN FROM THE MOUNTAINS OF WESTERN PERSIA

These nomadic inhabitants of Luristan are the lineal descendants of the old Iranian stock of the time of Darius and Xerxes. This young man's tribe is indicated by his figured sash, which has been carefully adjusted from a twenty-yard length of cloth.

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HOW TO OBTAIN THE BULLETIN

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The Lurs of Luristan

WHEN news dispatches tell that the Lurs of Luristan, in western Persia, again are rebelling against Teheran, a vista of history opens out which is almost as long, and fully as alluring, as the revelations of Tutankhamen's tomb.

Persia itself is the only land of Old Testament times which retains its identity, name and nationality to this day, and the Lurs are believed to be the aborigines of this ancient country.

Persia Still Is Primitive

The laws of the Medes and Persians have become a synonym of immutability; Persia itself, almost railroadless, primitive and isolated, is essentially unchanged. And the remote Luristan province, on its western border, corrugated by mountain ranges, is one of the most backward and unaltered regions of all Persia.

Luristan nominally accepted Mohammedanism, but the Lurs pay scant attention to the Koran or to the Prophet. Their religion embraces a philosophical belief in reincarnation and the practice of ancient heathen rites.

The Elam of the Book of Esther included Luristan, and the ruins of Susa, within the borders of the present province, yielded to excavators of recent years specimens of pottery bearing geometrical designs, reminders that some of our mathematics, especially our algebra, came from Persia.

Gives Us Many of Our Fruits and Flowers

Some of our finest fruits and flowers and much of our jewelry are Persian gifts to our civilization. A Persian legend attributes the discovery of wine to a queen's toothache.

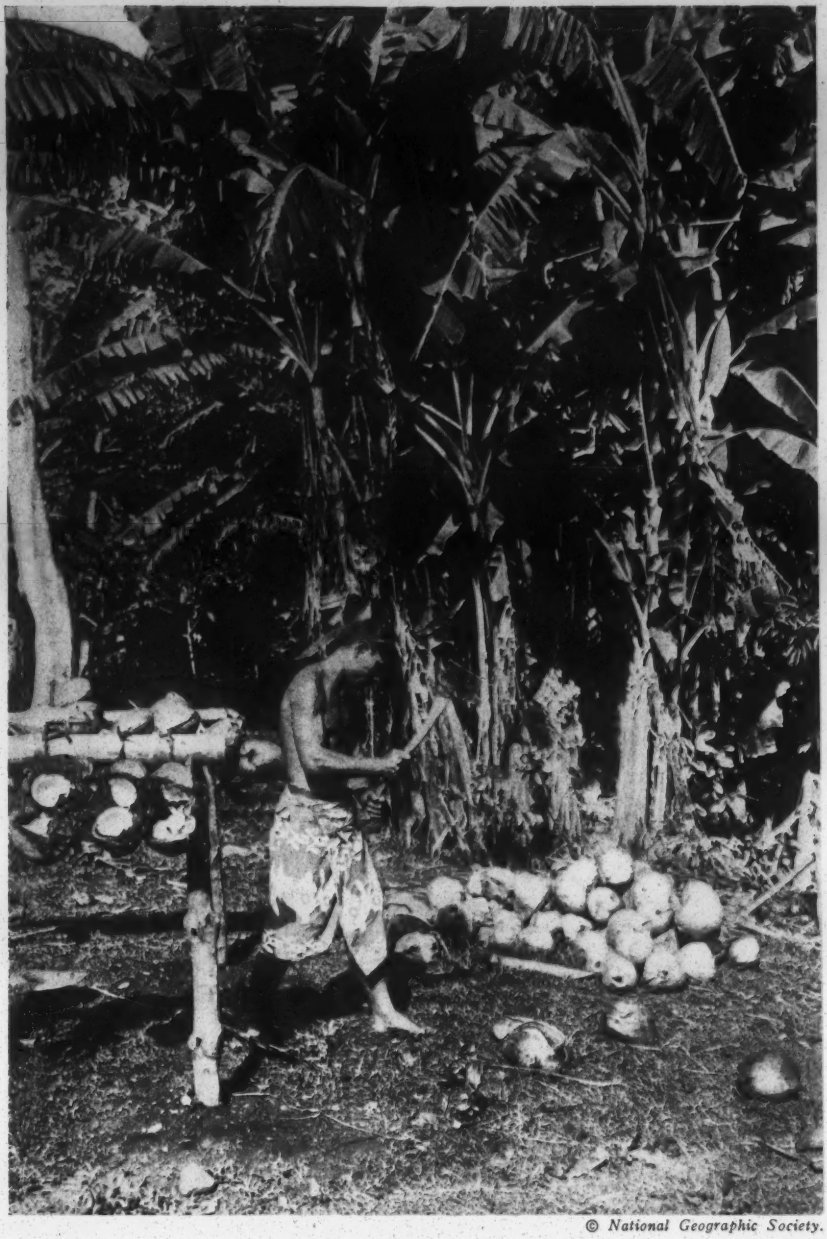
A shah had placed grapes in a jar to preserve them and they fermented, so the story runs. Thereupon His Majesty marked the jars "poison." After sleepless nights with a throbbing molar the Queen determined to end her misery and swallowed a liberal portion of the "poison."

She fell into a deep sleep, and when she awakened the pain had gone! Therefore, the native will tell you, the Persian word for wine to this day means "sweet poison."

Alexander's Last Campaign

A superstitious general might hesitate to invade Luristan. There Alexander the Great made his last campaign, offering up the enemy as human sacrifices to the spirit of his friend, Hephaestion. There, too, Antiochus IV attempted to loot the temples, was driven to the "shameful retreat" mentioned in the Book of Maccabees, and shortly after that experience he lost his reason.

Aside from its gifts of peaches, oranges, spinach and polo to western peoples, Persia has for America two modern points of contact. An American body of experts has been trying to put the country on a sounder economic basis, and oil bids fair to overshadow all other products of the ancient kingdom.



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PREPARING FOR MARKET THE ONLY ARTICLE WHICH THE MARQUESAS ISLAND GROUP SENDS TO THE OUTSIDE WORLD

The coconut palm not only furnishes the native with copra, his medium of exchange, but provides him with food, with drink, with the roof for his house, and the fiber for his mats, baskets, and ropes (see Bulletin No. 4).

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New Light on Etruscan Origin

ONE OF the most puzzling mysteries of history, the civilization of Etruria, famous rival of Rome, may be solved by the further study of a very ancient city near Ferrara, Italy.

Tombs found beneath the mud deposited by the Po River are of a period antedating the founding of Rome and indicate an Etruscan origin. Romulus, founder of Rome, suckled by a she-wolf, according to legend, found the Etruscan people firmly established when he began Rome. Legend gives them a league of twelve cities thriving on the rich fertile plain to which Egypt, Greece, and Africa paid bounteous tribute in gold, silver, scarabs, rare vases and priceless gems. Pisa, famous today for its leaning tower, was a small village of rich, extravagant Etruria. All the great cities have vanished.

Fell Victims to Luxury

Etruscans are supposed to have entered Italy from the Po region. Whether they came from Macedonia, the home of Alexander the Great, or whether they were a colony established by Greece in the days of her grandeur may be decided by the remains of the lost city discovered near Ferrara. Like Rome, Etruria fell victim of her sin. Diodorus wrote, "Their country was so fertile they derived therefrom not only sufficient for their needs but enough to supply them with luxuries. Twice a day they partook of elaborate repasts at which the tables were decked with embroidered cloths and vessels of gold and silver. The servants were noticeable for the richness of their attire. In fact, giving themselves up to sensuous enjoyments they had naturally lost the glorious reputation their ancestors had won in wars."

Etruria to-day is a country of dun fields and deep rocky ravines. Ferrara, too, where the ancient Etruscan city has been unearthed, is a dismal faded flower living on the memories of its glorious blooming in the bright days of the Italian Renaissance.

Reminders of Famous Names

Scraps of graceful cornices and weather-worn marble remind the visitor of famous names; of Lucrezia Borgia, who had been married four times by her father Pope Alexander VII at the age of twenty-two; of Tasso who wrote "Jerusalem Delivered" while living under the patronage of the famous Lucrezia. Titian achieved his first great success in Ferrara with a magnificent Renaissance canvas for the altar of the church of Fari. Then there was Aldus. Even to-day men who deal with type the whole world round know and praise the work of this man, who, following close on the heels of Gutenberg, inventor of printing, produced type which is still a standard of grace. It was Aldus, also protege of Lucrezia, living at the magnificent ducal palace of Ferrara, who developed what is now known as italic type.

Aldus was a scholar as well as a printer. His emissaries and fellow-workers scoured Greece and Constantinople for the fast disappearing Greek gems of literature. He produced the first Greek grammar and saved to the world price-

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Herodotus Strikes Oil

Neither of these contacts is new, however, for as early as the reign of Shah Abbas, in the sixteenth century, Persia engaged British military men to train her army. And Herodotus made the first report on her oil, when he wrote:

"Near Ardericca is a well which produces three different substances, for asphalt, salt and oil are drawn up from it in the following manner: It is raised by a balance beam to which, instead of a bucket, half a wine skin is attached. Having dipped down with this, a man raises it and pours the contents into a reservoir. It is then poured from this into another and assumes the different forms; the asphalt and the salt immediately become solid, but the oil they collect and the Persians call it Rhaudinance. It is black and emits a strong odor."

Bulletin No. 1, January 26, 1925.

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WINDING SILK ON QUILLS IN A MODERN MILL

The hundreds of spools of white silk thread shown at the top of the picture have been wound by the machine which the operator is tending. These spools, or quills, are now ready for the shuttle and the loom. The American silk industry employs more than a hundred thousand operatives in converting annually 25,000,000 pounds of raw silk into a finished product (see Bulletin No. 5).

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A Possible Battle of Rivers

A NOVEL sort of international controversy was a "battle of the rivers" indicated by a dispatch from the Pyrenees region which said that France was considering the diversion of one of the French headwaters of the Spanish river Segre. Meanwhile Spanish engineers studied the possibility of making a retaliatory diversion of the Garonne which rises in Spain and flows through France.

To say that if France shifts the headwaters of the Segre, Spain, in the valley of the Garonne, may give her "a Roland for her Oliver" not only describes the situation in regard to these rivers, but it happens to put this well known phrase to a singularly appropriate use. It was in the rugged Pyrenees country that the greatest exploits of those two knightly peers of Charlemagne are supposed to have been performed. Not many miles away, in fact, is the great cleft in the mountains called the "Breach of Roland" which legend says the hero carved at one stroke with his Gallic counterpart of Excalibur.

Kashmir-Like Vale in Pyrenees

The country about the headwaters of the Spanish Segre is the better known of the two regions. It is the more or less famous Cerdagne, perhaps the most beautiful of the extensive Pyrenees valleys—a region that might well lay claim to being the peer of any valley of Switzerland, Italy or the Tyrol, any vale of Kashmir, or any of Colorado's charming emerald "parks." As level almost as a floor, the Cerdagne is the product of extensive glacial action. To the south tower the great snowy peaks of the Spanish Pyrenees; to the east and north, those of France; and to the west rises the mighty bulwark of Andorra, the tiny republic of a handful of Catalan mountaineers who have tenaciously kept their independence and their medievalism, wedged in between two strong nations.

This is one of the historic highways between Spain and the north. Hannibal is asserted to have come near here on his memorable march toward Rome. Roman legions marched by and planted their colonies. The Saracen horde poured through to grasp southern France. And across the Cerdagne, in turn, came the Army of Charlemagne to press the Moors southward in the retreat that finally cleared Europe of their rule.

Boundary Arbitrary Line

French and Spanish forces have flowed and ebbed across the beautiful valley many times. At last, by the Treaty of the Pyrenees in 1659, the Cerdagne was divided between the two nations. Between France and Spain the crest of the Pyrenees serves as the natural boundary throughout most of its extent. But in the Cerdagne the international line runs across the fair mountain valley, dividing it in a way in which Nature has no part. For a mile or so it runs almost literally across fields, then climbs along foothills toward the Andorran frontier.

In the other direction the line follows for a space a tumbling mountain stream over which a small bridge carries the road from France to Spain. Upon a hill on the south side is the Spanish town of Puigcerda, long the natural capital and trading center of both the Spanish and French parts of the valley; beyond the bridge on the north is Bourg-Madame, the railhead of France.

less works of Horace, Plato, Socrates and other writers, philosophers, and singers who will always be intellectual giants of civilization.

Made Fine Art of Wickedness

Brilliant and colorful as was the Italian Renaissance period it was also corrupt, immoral, and wicked beyond belief. Great works of Titian, Bellini and Raphael were balanced by diabolical murders, by assassination bought and paid for, by poisonings, by internecine wars, by religion and political life both sunk in a morass of evil practices. Into such a setting a famous son of Ferrara was born, the noted Savonarola. He foreswore the corrupt court life and like a prophet of the Old Testament went through the land preaching against wickedness and assuring God's forgiveness for the penitent. Great crowds were charged with enthusiasm by the power of his oratory; the people changed their ways of life, simple garb was assumed by thousands, and monarchs were overthrown.

So powerful did Savonarola become that enemies plotted his death. Finally he and two of his followers were tried by a jury of their enemies, condemned to death, hanged, and their bodies burned. Amid the memories of great courts, great painters and great martyrdom Ferrara lives, sleepy and stodgy under the sun and the Italian blue sky. Now with the discovery of the Etruscan town a new memory is added to the already long list.

Bulletin No. 2, January 26, 1925.

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A BROKEN MISSISSIPPI RIVER LEVEE AT LUCCA, ARKANSAS

Not only Holland and the Acadian home of Evangeline have protected themselves by dikes, but scores of the great rivers of the world are paralleled by earthen or stone embankments (see Bulletin No. 3).

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A "Cross Word Puzzle" in Plant Names

PROBABLY the most confusing and most frequently misspelled names of the plant world are: Coca, Cacao, Cocoa, Coco and Coconut.

The fortunes of nomenclature make similar the spelling of a shrub which produces a powerful narcotic, of a tree which yields a delectable beverage, and of a palm which provides an ingredient for soap and candy. Moreover it further happens that the "a" and "o" variants in these names render them all but indistinguishable in the average person's penmanship.

Cocoa Not from Coca Tree

The word COCA refers to a South American shrub, extensively cultivated in Peru, where its dried leaves are mixed with lime and chewed by the natives for their stimulating effect, and from which the cocaine of medical use is obtained.

The leaves resemble tea leaves somewhat, but they are peculiar in that their upper and lower surfaces are entirely unlike—the upper is deep green, smooth and velvety, while the lower is light green with a paler band on each side of its midrib.

The plantations of Coca occur on the lower Andean hillsides, and the leaves are eaten by natives and fed to mules because, in addition to their stimulating effect, they make respiration easy in climbing at high altitudes.

Aztecs Used Beans for Money

The word CACAO is the name of a tree, cultivated in South America also, as well as in Mexico, Central America and the West Indies. It is from the pulverized seeds of the Cacao that two of the world's best-known plant products, COCOA and Chocolate, are derived.

The Aztecs prized the Cacao tree highly; they used the beans of the tree for money until the Spaniards showed them that gold was a better exchange medium.

The Mexican State of Tobasco, and the Soconusco region of Chiapas State, gave names to the kinds of cocoa which rank with the Mocha and Java of the coffee output. In Chile and Peru cocoa still is called "soconúsco" and it is a mark of honor to be invited to take a cup of the rich, chocolate beverage. The viceroys of Mexico used to send the King of Spain soconusco as a special gift.

The word coco is the name of a tree which produces the familiar Coconut (frequently misspelled "cocoanut").

A Palm of Many Uses

The COCONUT tree is to the South Sea Islanders what grain is to our plains States, or cotton is to our South—only more so. It is the most precious gift of Nature to the dwellers on coral isles, and where it does not grow usually there are no inhabitants.

The green coconut furnishes milk and a delicate meat like the white of a soft-boiled egg. The ripe nut provides the copra of commerce. The dried and polished shells make water bottles and oil flasks.

The fiber which surrounds the nut in the husk is twisted into cord, which

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The valley is an irrigated garden spot for its simple peasants, alike in its French and Spanish portions. Everywhere the available soil is carefully tilled, or the flowered meadow-lands pastured with stock. Until just before the World War, the Cerdagne was remote from the world, and the tourists who knew its calm beauty and its unsurpassed sunsets were few. With the completion of an electric railroad to Bourg Madame this scenic gem of the Pyrenees became suddenly accessible, and since the War its visitors have been more numerous. Puigcerda shares in the popularity, but the Spanish valley south and west of the town still has the primitive flavor of the past.

Garonne's Headwaters More Isolated

The heads of the northern valleys of the Cerdagne are the French sources of the Segre. The chief of these reach probably 20 miles into French territory. They furnish, of course, only a part of the waters of the Segre. Other tributaries rise in Andorra and in Spain. But the water of French origin is undoubtedly of great importance immediately south of the international line.

The Spanish portion of the French River Garonne, some 50 miles to the west of the Cerdagne, is much more isolated than the latter. The Spanish call this valley the Valle de Aran. It is in almost the geographical middle of the Pyrenees in a region not at all developed by railroads on the Spanish side and little developed on the French side. A well-marked defile of the river as it emerges from Spain into France operates to separate the Spanish and French valleys in contrast to the situation in the Cerdagne. Some 20,000 Spanish mountaineers inhabit the Valle de Aran, and because of their isolation they have almost as marked a degree of independence as the Andorrans.

The water flowing from Spain into France in the Garonne valley is probably considerably greater than the French water flowing into Spain through the Segre.

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COCA-DRYING YARD AT SANTA ANA

The leaves are spread out on the stone pavement and dry rapidly in sunny weather. Rainy weather interferes seriously with the drying operation, for the leaves may have to be spread out and carried in several times. If a sudden rain wets the coca before it can be taken under cover, the leaves are discolored and their commercial value is reduced (see Bulletin No. 4).

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How "Heaven Worms" Make Milady's Silk

YOKOHAMA is winning back her position as premier silk port of Japan. On September 1, 1923, the earthquake practically obliterated Yokohama as a thriving city of 423,000 souls. In less than 18 months she has practically recovered her chief business, silk export.

Japan, the land of the rice paddy, became Japan, the land of mulberry orchards, to satisfy the wishes of American women. For thousands of years silk was the cloth of queens. To-day what was once a princess' dowry of silks is the property of nearly every stenographer of any metropolis in the United States.

If a worm shall serve a princess, though she be multiplied by fifty million, that worm ought to be lifted above the ranks of common crawling things. Will it make silk stockings any more attractive to American women for them to know that the silk was spun by "heaven worms"?

Precision Seems Magical

To see these models of perfect conduct in their swaddling clothes, the visitor in Japan must adjust his itinerary exactly. He must stop at some farm house almost on the very day the mulberry leaves burst from tightly wrapped buds to crinkled tiny leaves, unironed by the sun. Centuries of selection enable the "heaven worm" to time his debut with his breakfast. When the silk worm is as thin as a bit of black thread, and as short as the width of a pencil-lead, he must have new, tender leaves, and the precision with which silk worm eggs hatch and mulberry leaves unfold approaches magic.

Though the "heaven worm" fulfills the edict that "children must be seen and not heard," he is a perfect pig for food. He eats all night and all day. He must, because he is required to multiply his weight hundreds of times in forty days. The silk worm's discreet silence in youth is broken in his lusty old age. Japanese, however, love the soft, rainlike sound produced by thousands of worms, earnestly eating.

Store Millions in Homes

Barring gluttony, the "heaven worm" is as domesticated as a good dog. Silk worms are raised in shallow rice-straw baskets with narrow rims, yet the Japanese store millions of them on shelves in their homes with perfect assurance that the spark of adventure will never prompt them to roam abroad and underfoot. Scientifically, their fast-traveling, fuzzy, American cousin is wild by comparison.

Silk culture is a pin-money industry in Japan because it mainly employs mothers, mothers-in-law, grandmothers, great-grandmothers, and children, during a short period of the year, seldom more than a month and a half. On a farm the head of the house may take no part; often he is a government official, a merchant, or an army officer. Silk is a "velvet" crop for the family coffers because, except for the cost of fertilizer for mulberry trees, the investment is practically nothing. Most farms sell their cocoons direct to agents.

Rules of hospitality are amended during silk season. Ordinarily a visiting relative or friend is entertained and given tea and food. But in silk season it is perfectly good form for the visitor to go to the kitchen and help himself. The silk worms almost force the family out of house and home. A typical farm may

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serves a multitude of ways, from binding the rafters of huts and timbers of canoes to tying sharks' teeth to spear blades and making bird cages and fish nets.

The sap which drips from the severed flower stalk is sweet toddy which, fermented, becomes a favorite intoxicant. The unopened leaves of the tree's crown make a delicious white salad, the "sailor's cabbage" of old whaling days.

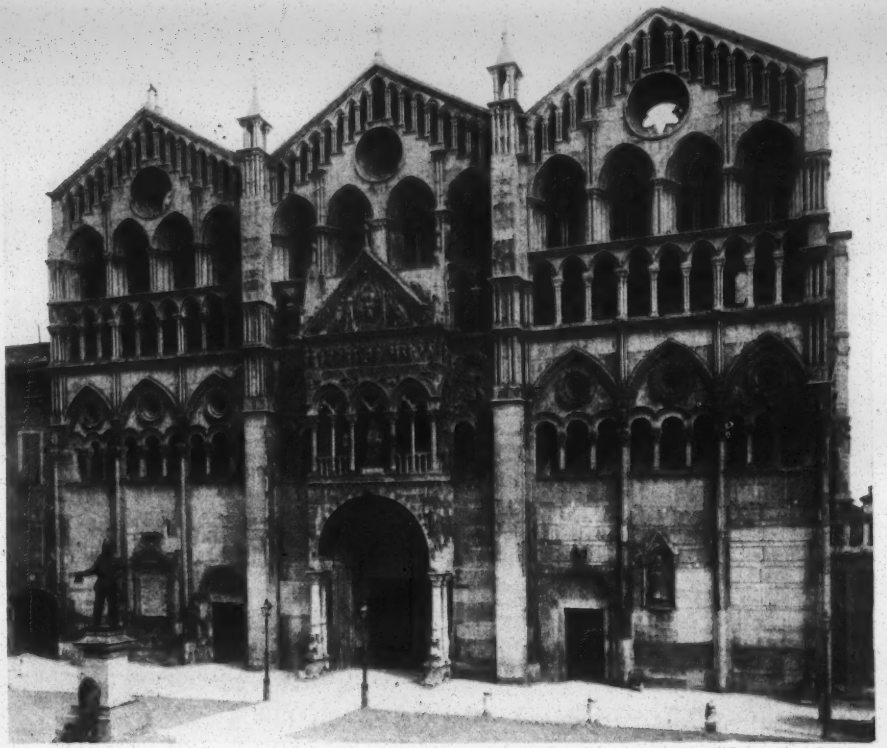
The sheath at the base of the leaf, the lower leaves, the leaves dried, and the tree trunks are put to a wide variety of other uses.

A Tree of Water-Borne Seeds

To make the idyllic picture perfect for the idle native the coconut trees plant themselves. With their great, air-filled husks the coconuts travel up and down the seas for months, and even years, until they find a beach where they gain a roothold. Consequently no matter what the geological history, or other plant life of the vast number of islets in the tropical waters, their shores are fringed with coconut palms.

In your memory's eye then, coconut and coco may be grouped together; cocoa, the beverage, and the Cacao tree from which it comes; and Coca, a shrub, which is the source of cocaine.

Bulletin No. 4, January 26, 1925.



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THE CATHEDRAL AT FERRARA: NORTHERN ITALY

With its imposing facade of three series of arches, placed one above the other, and its projecting portal, the cathedral at Ferrara is one of Italy's best examples of Lombard architecture. It was begun in the twelfth century (see Bulletin No. 2).

have a house of nine rooms on one floor. It is about 30 feet wide by 50 feet long. While the worms are small and thousands live happily on one tray there is ample shelf room, but when they are fat, old, and juicy only three hundred can enjoy the same bed and board. Then every inch of the house seems filled with trays.

At the end of forty days' growth the worms must be furnished with facilities for the spinning of their cocoons. Innumerable tiny rice-straw baskets are constructed for the insects. Silk worms are not allowed to fasten their spun houses on twigs because that would cause wastage in the unwinding process. One, two or three worms will frequently spin in each straw basket, suspending their cocoons in mid-air.

As in the case of the honey-bee and the chick, the hatching period for the silk moth is twenty-one days; but if the cocoon is to be used for silk it must be heated over a slow fire to kill the pupa before it bores through the silken walls. At the silk mill or filature the cocoons are divided into lots of fifteen to twenty, placed in basins of warm water, and the thread ends brushed out. The single strand formed by twisting together the threads from fifteen to twenty cocoons when wound with fifteen or twenty similar strands forms the silk yarn which is the basis of the raw silk of commerce. Such a strand of yarn thus contains 225 or more threads from as many cocoons.

Curious Tools Are Used

Curious tools are used in silk culture—cleavers, sieves, chop sticks, and long feathers. Cleavers are used to chop the tender mulberry leaves into tiny pieces for the young worms. In order that the food may be small enough for the tiny insects it is sifted over the trays with sieves. A soft feather is used to clean the trays. Tending the trays is the most time-consuming operation of silk-worm culture, for the young worms must be changed to fresh trays twice a day and, when older, at least once a day.

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SWANS ON THE AVON, BENEATH THE BATTLEMENTS OF WARWICK CASTLE

To sense the glory of the past, one should leave the convenient railways of England and float on the quiet rivers of the land. Such weathering walls of huge, silent castles stand as mute memorials to a rich history, festooned with epoch-making events. In all lands, ancient and modern, rivers have had a potent bearing upon human geography. A fascinating study topic is that showing how the Nile and the Mississippi, the Rhine and the Amazon, have influenced the course of civilization (see Bulletin No. 3).